

APPENDIX A

WATER CONTROL PLAN

INITIAL LOST CREEK FILLING

1. Closure Criteria.

- a. Diversion tunnel stoplog to be lowered between 15 Oct and 1 Dec 76.
- b. Resident Engineer to alert interested parties of "intent to close the following day" if conditions are then suitable.
- c. Resident Engineer's recommendation for closure to be furnished District Engineer at least 6 hours in advance of proposed closure time. With District Engineer's preliminary approval, Resident Engineer notifies PP&L to return Eagle Point Power flow to Big Butte 6 hours prior to proposed closure.
- d. Fishery Agencies' approval for closure received by Resident Engineer through Mike Evenson prior to lowering stoplog.
- e. District Engineer's final approval for closure received by Resident Engineer prior to lowering stoplog.
- f. Flow between 1,000 and 1,500 cfs and rising and expected to rise to 2,000 cfs within a few hours.
- g. Weather forecast for air temperatures above freezing but less than 55° F. for three to four days. Rain forecast for the following 24 hours.
- h. PP&L's Big Butte Creek diversion has been closed down at least 6 hours before closure.
- i. For safety reasons, closure to start during daylight conditions and prior to 4:00 p.m.
- j. Sprinkler system confirmed to be operating at time of closure.

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k. It may not be feasible to meet all of the above desired conditions simultaneously. If so, closure may have to be made under less than the full satisfaction of all of the criteria at the District Engineer's decision.

2. Resident Engineer Responsibilities.

a. Overall charge of closure and filling operation until responsibility is transferred to Project Operations. (Transfer at pool elevation 1751.)

b. Install forebay staff gages and downriver staff gages at spawning areas.

c. Read forebay and downriver staff gages and furnish data to Hydrology Section.

d. Supervise project surveillance activities.

e. Coordinate with Fishery Agencies through Mike Evenson on closure timing.

f. Coordinate with PP&L to insure closure of their diversion facilities on Big Butte Creek 6 hours before lowering stoplog. Alert PP&L of "intent to close" the day prior to actual closure.

3. Hydrology Section Responsibilities.

a. General.

(1) When requested by Resident Engineer, Hydrology will dispatch personnel to the project to advise Resident Engineer on weather and river conditions and forecasts.

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(2) Furnish inflow, outflow, and lake elevation to interested parties.

(3) Monitor water quality (inflow, outflow and lake) information received from Project Operations.

(4) Develop initial and ongoing hydrologic information such as filling probabilities, effect of flood situations, filling rates, etc.

(5) Notify Resident Engineer through Chief, Engineering Division if and when changes in the release criteria or filling schedule must be made.

(6) Parties to be furnished above information:

PROJECT ENGINEER LOST CREEK LAKE PROJECT	CHIEF, HYDROLOGY SECTION PLANNING BRANCH ENGINEERING DIVISION
AREA ENGINEER ROGUE RIVER BASIN PROJECTS	CHIEF, HYDRAULIC DESIGN SECTION DESIGN BRANCH ENGINEERING DIVISION
RESERVOIR CONTROL CENTER WATER CONTROL BRANCH NORTH PACIFIC DIVISION	CHIEF, F&M BRANCH ENGINEERING DIVISION
CHIEF, ENGINEERING DIVISION	CHIEF, DESIGN BRANCH ENGINEERING DIVISION
CHIEF, CONSTRUCTION DIVISION	CHIEF, PLANNING BRANCH ENGINEERING DIVISION

b. Phase 1. (Before lowering of stoplog.)

(1) Gages and Water Quality Stations.

(a) Insure inflow gages are operational.

(b) Insure reservoir water level gage is operational.

(c) Insure outflow gages are operational.

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(d) Establish water quality stations.

(2) Weather and Streamflow Monitoring.

(a) Provide up-to-date record of streamflow and forecasts.

(b) Provide up-to-date record of weather and forecasts  
(temperature, precipitation, cloud cover, etc.).

(c) At first sign of possible conditions conducive to lowering stoplog, immediately notify Resident Engineer; District Engineer; Chief, Engineering Division; and Chief, Construction Division. Upon request of the Resident Engineer, Jeff Hanson will immediately go to the project to provide on-site assistance to Resident Engineer with forecasts.

c. Phase 2. (From lowering of stoplog until closing of bypass gate in stoplog.)

(1) Collect and distribute data to interested parties on inflow, pool and outflow gages.

(2) Provide up-to-date weather and streamflow forecasts (at-the-project assistance if required).

(3) Monitor water quality inflow, outflow, and pool as required.

d. Phase 3. (From closing of bypass gate in stoplog until reaching first full pool.)

(1) Collect and distribute data to interested parties on inflow, pool and outflow gages.

(2) Provide up-to-date weather and streamflow forecasts (at-the-project assistance if required).

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(3) Monitor water quality inflow, outflow, and pool as required.

(4) Coordinate with NPD Reservoir Control Center and Resident Engineer regarding daily reservoir operations. Provide plans to interested parties.

4. General Information.

a. Reservoir regulation will be the responsibility of NPD Reservoir Control Center in Phase 3.

b. Downstream water levels in vicinity of spawning areas will be monitored by Resident Engineer until decision to discontinue sprinkling is reached.

c. The following table shows the minimum flows that Fishery Agencies desire for fishery enhancement.

<u>Fishery Enhancement Outflows</u>	<u>cfs</u>
1 February - 30 April	700
1 May - 15 May	1,000
16 May - 31 May	1,300
1 June - 10 June	1,500
11 June - 30 June	1,800
1 July - 20 August	2,000
21 August - 7 September	1,500
8 September - 31 January	1,000

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5. Detailed Reservoir Regulation Plan. Regulation will be consistent with draft Reservoir Regulation Manual except:

a. Until the pool reaches elevation 1,700, the outflow will be maintained at the lesser of 1,000 cfs or inflow, and the pool will be allowed to fill at any rate in event of flood.

b. When the pool exceeds elevation 1,700, the rate of pool rise will be limited to 3 feet/day, if possible, by increasing outlet flows up to their full capability (see attached rating curve). The outflow (through 1 Feb 77) during fill periods will be:

(1) Equal to inflow if inflow is less than 1,000 cfs.

(2) 1,000 cfs if inflow equals 1,000 cfs or more and rate of rise is less than 3 feet/day.

(3) As required to limit rate of rise to 3 feet/day if possible.

c. Following short-term flood storage 10 feet in excess of that from the preplanned filling rule curve, the pool will be evacuated as rapidly as feasible at a rate not to exceed 5 feet/day to the elevation that would have developed if no flood had occurred and the pool had filled at a rate of 3 feet/day. Pool filling will then restart under guidelines of paragraph 5b above.

d. When the pool intersects the routine reservoir rule curve and does not require evacuation under the provisions of paragraph 5c, further filling will be controlled by the routine reservoir rule curve. Flood control storage will be restricted until full pool has been reached by retention

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of the 3 feet/day maximum fill rate except that the spillway will not be used to restrain fill rate unless called for by the Special Spillway Regulation Curve in the draft Reservoir Regulation Manual.

e. For examples of regulation and rule curves, see the attached drawings.

6. Water Control Personnel.

George Holmes--Alternate Jeff Hanson  
Closure

District Office  
503 221-6470  
Home: 503 655-4416

Jeff Hanson--Alternate George Holmes  
Weather & Streamflow  
Monitoring & Forecasting

District Office  
Project Site  
NPP 503 221-6468  
Home: 503 655-2909

Doug Larson--Alternate George Holmes  
Water Quality--Monitoring

District Office &  
Project Site  
503 221-6471  
Home: 503 224-3501